

Date: Fri, 5 Aug 94 04:30:14 PDT  
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>  
Errors-To: Ham-Digital-Errors@UCSD.Edu  
Reply-To: Ham-Digital@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Digital Digest V94 #261  
To: Ham-Digital

Ham-Digital Digest                      Fri, 5 Aug 94                      Volume 94 : Issue 261

Today's Topics:

                    GIANT Help Wanted  
                    Is the KAM 9612 out yet ?  
                    REJECTED: Ham-Digital Digest V94 #260  
                    Tandy 1000EX

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>  
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 4 Aug 1994 19:04:14 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!dancer.ca.sandia.gov!  
cronkite.nersc.gov!fastrac.llnl.gov!lll-winken.llnl.gov!fnnews.fnal.gov!  
usenet@network.ucsd.edu  
Subject: GIANT Help Wanted  
To: ham-digital@ucsd.edu

I just happened to run into this news group while looking  
for something. I am involved in an as yet to be approved or  
funded project called the GIANT array.

It seems that several of the cosmic ray experiments have seen  
some very high energy events. Of order  $3E20$  electron volts  
or the energy of a well thrown baseball. It turns out that  
by theory such events are not possible unless they originate  
very near to our galaxy (Well, within 50 mega parsecs - if  
you call that "near") as they should be slowed down to of  
order  $1E18$  by interaction with the 3 degree background.  
Astronomers do not see a likely candidate nearby. So there

is a real mystery.

A "cosmic ray" is a single something coming in from outer space. Those with higher energy hit atoms in the upper atmosphere and create secondary particles. The secondaries hit other particles, etc., and the ones we are looking for finally result in of order  $10^{17}$  particles spread out over a few tens of square miles. The final particles are a mix of muons, electrons, and gamma rays. The mix is determined by the original particle which is most likely a proton or an iron nucleus. Which one it might be is very interesting to physics, so the experiment is designed to sort this out by attempting to time and identify as many particles as possible.

To study these events an array of detectors is planned. The present design calls for 3000 detectors each about 10' by 10'. The detector will likely be a scintillator, lead, scintillator sandwich. We call them Leadburgers, which distresses our leader who is a little too straight to appreciate the humor, but he is coming around. The top scintillator detects muons and electrons, the bottom scintillator detects muons and gamma rays. The Leadburgers will be spaced on a 1 mile hexagonal grid. A roughly 3000 square mile device - so we think the term GIANT is appropriate. The whole mess will be placed out in a desert somewhere and there will likely be two - one in each hemisphere.

Obviously we will not be able to afford to string power lines between all these units, so they must be solar powered. This means very low power electronics. We will synch them all together (GPS has been suggested though I think we can do with less) somehow, to 50ns or better.

The plan has been to use packet switching and time division for transmission so that there would be no two stations that could hear each other broadcasting at the same time. (We plan to avoid the collision problem by precisely timing all transmissions since we need to know time accurately for the measurement.) Thus the reason I was attracted to this news group. As we talk about it, when one detector sees something that might be part of a giant shower, he calls up his neighbors on his cellular phone and asks them if they saw something too. If they agree that an event has occurred, it is then passed from station to station until it reaches the control room. All this is supervised by a computer (again low power) resident in each detector.

Because the people involved think that way, the project will be done on a shoestring. At the moment we have no money, and I am working for the fun of it. In the end, we hope to do the whole project for of order 50M. So far our leader has done pretty well rounding up the few hundred thousand needed to bring physicists from around the world to our design study so I am optimistic that we will get to do the project if we do a good job of design.

The initial design study will be carried out during the first six months of 1995 at Fermilab (near Chicago). It will be a world wide collaboration with physics representatives from Australia, UK, Germany, France, Russia (various former republics), China, and our leader (a Nobel prize winner) is even visiting Viet Nam to try to get really universal support from the physics community. Obviously, the work is not classified.

We are presently building and testing the instrumentation that will go into the Leadburgers. We would soon like to do some of the radio transmission tests that will help guide the design here at Fermilab. We also hope to build a few station prototype here. While those involved have experience with most things, and indeed it is the pride of the physics community that they can do designs of most things on the back of an envelope from first principals; we have little experience with radio transmission.

It is obvious from reading this group that Motorola is in our back yard, and someplace there is the experience and talent that we need. Also the amateur radio community could help us a lot. I am therefore looking for someone that would want to join in this project and give advice and perhaps even do some work. An amateur that wanted to work with us would be very useful during preliminary tests if his license can be used for the experiments.

Here is an example of what I would like to test right now. We need to know the exact time of arrival of the events. This is used to determine the particle path and thus where it comes from. 100 nanoseconds and 1.5 kilometer spacing gives a path to one degree. We would like to do somewhat better. We already know from tests in Europe, that GPS receivers can give time to a few tens of nanoseconds. Putting a GPS receiver on each Leadburger is a bit expensive and takes a lot of power which is also expensive. So we would like to perform some tests with a central tower going tick, tick,

tick, and set up a pair of receivers, phase locked loops, etc., and see how well we can match time in a pair of receivers spaced some distance apart.

It is not very likely that a helper will get paid any more than I am at the moment. In particular, this is not the kind of project where there will be a lot of pork to be grabbed up by some political tagging of funds. That is what killed the SSC. Hopefully we can keep this project small enough so that the porkers do not come after us. So there is no big profit to be expected for a commercial enterprise. We hope there is "GLORY" however, and think that a commercial venture might want to be identified with this project.

I personally am near retirement, and plan to make this my entertainment for some time to come. Cosmic ray research has rarely been the hot physics topic, so workers are here because they like it and are having fun. After many years of high pressure project work at Fermilab, this looks like fun to me. I really like the people involved.

Let me know if you are interested, or know someone that is interested. Lots of good technical paper material. Lots of glory. Lots of fun. No money. (Not quite so bad, if we get the project there might be travel to Australia or Chile or wherever the southern hemisphere device goes - or even pay for real work.)

Please do not think that you do not qualify just because you don't have some degree or other. We have all the degrees we need, what is needed is some good experience and smarts that can keep us from making a dumb mistake. You will find as I have that the physicists are quite willing to explain what you will need at your particular level. As an engineer, I have long noticed that physicists do not talk to each other in complex mathematical notation as they know they will not be understood.

Tom Droege  
droege@fnald.fnal.gov

-----  
Date: 3 Aug 1994 20:34:39 GMT  
From: newsgw.mentorg.com!wv.mentorg.com!hanko@uunet.uu.net  
Subject: Is the KAM 9612 out yet ?  
To: ham-digital@ucsd.edu

In article <1556.18.uupcb@totrbbs.atl.ga.us>, steve.diggs@totrbbs.atl.ga.us (Steve Diggs) writes:

```
|> -> Newsgroups: rec.radio.amateur.digital.misc
|> -> From: pfund@uni2a.unige.ch
|> -> Subject: Is the KAM 9612 out yet ?
|> -> Message-ID: <1994Aug2.170743.1@ugun2a>
|> -> Date: Tue, 2 Aug 1994 15:07:43 GMT
|> ->
|> -> Hi all,
|> ->
|> -> I just wanted to know if the KAM 9612 is out for sale yet ?
|> ->
|> -> Thanks for your info
|> ->
|> -> 73s de Daniel, HB9VBC
|>
|> They were selling like hotcakes at the Atlanta Hamfest, July 22nd. AEA
|> 9612 is a better deal, though.
|>
|> Regards,
|> Steve Diggs, KB4ZTN
|>
|> ----
|> Top Of The Rock BBS - Lilburn, GA          SYSOP: Steve Diggs
|> UUCP: totrbbs.atl.ga.us                    Snailmail: 4181 Wash Lee Ct.
|> Phone: +1 404 921 8687                     Lilburn, GA 30247-7407
```

Curious why you see the AEA as a better deal?

As far as I can tell from the literature, the AEA can only run one channel at a time (either 1200 OR 9600) while the Kantronics can run both at once (both 1200 AND 9600).

... Hank

--

```
Hank Oredson @ Mentor Graphics          Library Operations
Internet      : hank_oredson@mentorg.com  "Parts 'R Us!"
Amateur Radio: WORLI@WORLI.OR.USA.NOAM
```

-----  
Date: 4 Aug 94 17:07:48 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: REJECTED: Ham-Digital Digest V94 #260  
To: ham-digital@ucsd.edu

----- Mail rejected by CEO. -----  
No Routing Link Available    Mail not sent to:gary.rogers@dgc.ceo

----- Unsent message follows -----  
From: ham-digital@UCSD.EDU  
To: Ham-Digital@UCSD.EDU  
Subject: Ham-Digital Digest V94 #260  
X-Ceo\_Options: Document

CEO comments:  
See document for message.

CEO document contents:

Ham-Digital Digest                    Thu, 4 Aug 94                    Volume 94 : Issue 260

Today's Topics:

    ??USING MAC WITH KPC-3 AN  
    Amiga, baycom and amicom  
    cheap packet?  
    CQ Net/MAC users  
    Is the KAM 9612 out yet ? (2 msgs)  
    KaGOLD vs. KaGOLD w/pactor (2 msgs)  
    Looking for JVFAX 7.0  
    Upload FAQ MO-MIGA Magneto-Opticals

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policies or positions of any party. Your mileage may vary. So there.

-----  
Date: 4 Aug 1994 01:41:38 GMT  
From: news.sprintlink.net!sun.cais.com!news@uunet.uu.net  
Subject: ??USING MAC WITH KPC-3 AN  
To: ham-digital@ucsd.edu

Go ahead and use the Mac with the Hostmaster,it works wonderfully.I've

been using that setup for the last 1 1/2 years and have no complaint.  
A standard modem cable will work fine with the TNC and the Mac.I get  
better results by setting my baud to 9600...  
Will be glad to be of more assistance.Matter fact,I run a BBS that has  
a good collection of Ham related shareware,might want to give it a call  
and see if you could use something.  
The phone number is 202-298-6009.  
Take care...

-----  
Date: 3 Aug 1994 20:12:58 -0500  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
cs.utexas.edu!not-for-mail@network.ucsd.edu  
Subject: Amiga, baycom and amicom  
To: ham-digital@ucsd.edu

Greetings! Has anyone out in netland used the baycomm modem with an amiga? If so  
did you use it with amicom software or  
amiganos? Did you need to make any mods to the baycom? Any info is appreciated.

dave  
n9uxu

-----  
Date: Tue, 02 Aug 1994 08:51:44 -0400  
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!gatech!ncar!noao!asuvax!  
pitstop.mcd.mot.com!mcdphx!schbbs!mothost!lmpsbbs!NewsWatcher!  
user@network.ucsd.edu  
Subject: cheap packet?  
To: ham-digital@ucsd.edu

In article <CtpwIE.5ow@eskimo.com>, rdonnell@eskimo.com (Bob Donnell)  
wrote:

> Ross Frederick Blakeney (aa568@cfn.cs.dal.ca) wrote:  
>  
>  
> : --  
> : hello all, just wondering if there is anyway to use my modem as a TNC  
> : if I have a program for the baymod or similar????  
> : TIA  
> : 73 de VE1RFB  
> : -Ross-  
>  
>  
> Sorry, have to say, no, it's not going to work. The modulation standards

> used for phone modems and packet radio are different. The closest you could  
> come (and it >has< been used before) is to find an obsolete Bell 202 modem  
> and modify it for radio interface, TX/RX control, etc.

>

> 73, Bob KD7NM

>

> --

> -----

> Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org rdonnell@eskimo.com

> Western Washington Amateur IP Address Coordinator (206) 775-3651

> -----

What do you mean by the word "obsolete" in relation to a 202 modem? It's  
still the most popular modem when sending data over any type of radio link.

The reason being that the 202 is the ONLY modem which does NOT require a  
full-duplex (ala phoneline) audio path to hear the modem at the far end  
before it considers itself connected. The reason why 1200/2200 FSK still  
remains popular with the amateur packet community is that it works and is  
presently the ONLY commercial modem standard that does work!

--

Karl Beckman, P.E.

< If this English language is so

>

Motorola LMPS.RNSG.Analog Data

< precise, why do you drive on a

>

(Square waves & round corners)

< parkway and park on a driveway?

>

Any opinions expressed here do not belong to or represent Motorola Inc.

Amateur radio WA8NVW

NavyMARS NNN0VBH @

NOGBN.NOASI

-----

Date: 3 Aug 1994 21:27:04 -0400

From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net

Subject: CQ Net/MAC users

To: ham-digital@ucsd.edu

I have downloaded a copy of net mac and am now configuring it for my  
Mac...

I would like to learn the paths to get connected here in northern  
california. The most reliable mountaintop for me is Sonoma Mt on 145.73. I  
live in West Marin county.

Any help (advice), especially about obtaining an IP address would be  
appreciated.



Thanks in Advance    KD6ZZM

-----  
Date: 3 Aug 1994 09:35:08 GMT  
From:  
sol.ctr.columbia.edu!howland.reston.ans.net!cs.utexas.edu!convex!news.duke.edu!  
eff!news.kei.com!uhog.mit.edu!news.mtholyoke.edu!news.unomaha.edu!crcnis1.un  
l.edu!@l111-winken.llnl.gov  
Subject: Is the KAM 9612 out yet ?  
To: ham-digital@ucsd.edu

steve.diggs@totrbbs.atl.ga.us (Steve Diggs) writes:

>They were selling like hotcakes at the Atlanta Hamfest, July 22nd. AEA  
>9612 is a better deal, though.

Okay, I'll bite. What's a 9612?

Gary

-----  
Date: 3 Aug 94 00:13:00 GMT  
From: agate!howland.reston.ans.net!europa.eng.gtefsd.com!emory!wa4mei!totrbbs!  
steve.diggs@ames.arpa  
Subject: Is the KAM 9612 out yet ?  
To: ham-digital@ucsd.edu

-> Newsgroups: rec.radio.amateur.digital.misc  
-> From: pfund@uni2a.unige.ch  
-> Subject: Is the KAM 9612 out yet ?  
-> Message-ID: <1994Aug2.170743.1@ugun2a>  
-> Date: Tue, 2 Aug 1994 15:07:43 GMT  
->  
-> Hi all,  
->  
-> I just wanted to know if the KAM 9612 is out for sale yet ?  
->  
-> Thanks for your info  
->  
-> 73s de Daniel, HB9VBC

They were selling like hotcakes at the Atlanta Hamfest, July 22nd. AEA  
9612 is a better deal, though.

Regards,  
Steve Diggs, KB4ZTN

----

Top Of The Rock BBS - Lilburn, GA  
UUCP: tottrbbs.atl.ga.us  
Phone: +1 404 921 8687

SYSOP: Steve Diggs  
Snailmail: 4181 Wash Lee Ct.  
Lilburn, GA 30247-7407

-----

Date: Tue, 02 Aug 94 12:55:22 MST  
From: elroy.jpl.nasa.gov!usc!howland.reston.ans.net!cs.utexas.edu!asuvax!ennews!  
stat!david@ames.arpa  
Subject: KaGOLD vs. KaGOLD w/pactor  
To: ham-digital@ucsd.edu

kenman@iastate.edu (Kenneth D Anderson) writes:

>  
> I'm thinking of buying one of the GOLD programs to use with my KPC-3. I'm a  
> little confused: Obviously KaGOLD will work fine, but will KaGOLD w/pactor  
> work on my KPC-3? (At a later date, I might want to "upgrade" to a KAM and  
> use the pactor functions).  
>  
> The limited information I have doesn't make it clear.

The pactor option will only work on a KAM, it will not allow pactor to  
run on a non-pactor tnc.

david

---

Editor, HICNet Medical Newsletter  
Internet: david@stat.com  
Bitnet : ATW1H@ASUACAD

FAX: +1 (602) 451-1165

-----

Date: Wed, 3 Aug 1994 14:51:19 GMT  
From:  
ihnp4.ucsd.edu!agate!darkstar.UCSC.EDU!news.hal.COM!olivea!  
charnel.ecst.csuchico.edu!psgrain!rainrgnews0!pacifier!news.alpha.net!  
mvb.saic.com!eskimo!aandh@  
network.ucsd.edu  
Subject: KaGOLD vs. KaGOLD w/pactor  
To: ham-digital@ucsd.edu

Hi befor you spend \$100 for gold take

a look at xpkam you can download it from KF7XP  
bbs at 602 8981058 I think you will find it as good as gold  
for a lot less \$\$\$\$\$\$ 73 Jim K7UDG/UA4PDG  
for a lot less \$\$\$\$\$\$

-----  
Date: Wed, 3 Aug 1994 11:38:53 +0200  
From: zib-berlin.de!news.th-darmstadt.de!fauern!rrze.uni-erlangen.de!not-for-mail@uunet.uu.net  
Subject: Looking for JVFX 7.0  
To: ham-digital@ucsd.edu

ron@alpha.nsula.edu (Ron Wright) writes:

>I posted this question a couple of weeks ago and the only responses were  
>"I'm looking too, let me know if you find it!".

>so here goes: Has anyone found the new version of JVFX....

>The new version is JVFX 7.0 which I understand was recently released.

>Ron - KA5LUG

>--

Hello dear Ron,

I talked to Eberhard, DK8JV a few days ago.

JVFX Version 7 will be released within the next two months.

At the present time only "Beta-Releases" of Version 7 were given

to a limited group of persons.

So please "qrx" and keep waiting

73 de Dieter, DF4RD

Email: unrz45@daphne.rrze.uni-erlangen.de

>-----  
> ===== | Ron Wright | Voice: (318) 357-5594  
> | | | | | User Support Specialist |  
> |N| |S| |U| | Northwestern State University | Fax: (318) 357-5745  
> | | | | | Computer Center |  
> ===== | Natchitoches, Louisiana | Ron@alpha.nsula.edu  
>-----

-----  
Date: Wed, 3 Aug 1994 12:39:03 +0000  
From: pipex!demon!flevel.demon.co.uk!david@uunet.uu.net

Subject: Upload FAQ MO-MIGA Magneto-Opticals  
To: ham-digital@ucsd.edu

The following has been uploaded to Aminet (ftp.luth.se).  
Please allow usual time to mirror to other sites

References also to running under NETbsd and MSDOS with  
BFFSand PCfiling systems and for installation  
on PC systems. MO-MIGAs are V. fast magneto opticals  
for multimedia/video/animations/digitizing/net-serving/cdrom  
mastering applications. Preliminary info about 22G Juke boxes  
included.

FileName: MO-MIGA.FAQ.lha .....<note abbreviated filename  
for aminet  
Short: Magneto Optical Information - MO-MIGA  
Uploader: david@flevel.demon.co.uk (David Southwell)  
Author: david@flevel.demon.co.uk (David Southwell)  
Type: docs/misc

FAQs about the new MO-MIGA 1.2GB Magneto Optical drive.  
Contact addresses and speed tests included.

Also now in ftp.demon.co.uk:/pub/amiga/info/MO-MIGA.2.41.FAQ.lha  
^^^^^  
note full file name

If anyone wants a copy in either ascii or .lha/.gz/.Z  
with .uue encoding please email support@flevel.demon.co.uk  
with two line in the body of the message:

FAQ\_PLEASE

Followed by  
MAIL <ver> where ver is either ascii or .gz.uue or .lha.uue or .Z.uue

We apologise if you have received this article twice within twenty four  
hours. Unfortunately our newserver "lost" a load of postings  
(we think the whole lot) so we have had to repost. The bug has now been  
fixed and we hope no-one but ourselves has been inconvenienced.

<-( ..... <goat droppings

--

```
+-----+
! Email david@flevel.demon.co.uk                                     !
! Fourth Level Developments           Optical Magneto Drive Systems  !
! Multi-Media System Developers       for Amiga, PC & Apple          !
+-----+
```

-----  
Date: Wed, 3 Aug 1994 16:38:00 GMT  
From: world!dts@uunet.uu.net  
To: ham-digital@ucsd.edu

References <1994Jul28.163628.9346@hayes>, <31i6qf\$9qt@nanette.pdb.sni.de>,  
<31jnlu\$i7s@darkstar.UCSC.EDU>swidi  
Subject : Re: GTOR--A big improvement?

In article <31jnlu\$i7s@darkstar.UCSC.EDU>,  
James H. Haynes <haynes@cats.ucsc.edu> wrote:

>

>In article <31i6qf\$9qt@nanette.pdb.sni.de>,  
>W.F.Schroeder <schroeder.pad@sni.de> wrote:

>>In <1994Jul28.163628.9346@hayes> bcoleman@hayes.com (Bill Coleman) writes:

>>

>>[lines deleted]

>>

>>> Another tack is a multi-tone system like Piccolo.

>>

>>>Mutiple tones is the way to go for HF. You have to keep the symbol rate low

>

>>Do you have any detailed suggestions? How many tones? baud? protocol?

>>Make it work with the common 500Hz IF filters.

>

As I understand the Telebit PEP protocol (used in Telebit landline modems), it divides the telephone bandwidth (3kHz) into 512 or so frequencies, then sends bits down each frequency. I believe they do use phase modulation on each frequency, since they are set up to send 0,2,4,6, or 8 bits per baud, per frequency. Given the earlier comments about HF propagation, something similar but without the phase stuff (i.e. 1 bit per baud) might be interesting, then restrict the width to the number of distinct frequencies that can fit in 500Hz.

Telebit uses a TI 320xx chip (I forget which one is in the latest modem) to generate the waveform. It sounds downright ugly if you accidentally pick up a phone and listen...

--

```
-----
Daniel Senie                Internet:    dts@world.std.com
Daniel Senie Consulting      n1jeb@world.std.com
508-779-0439                Compuserve:  74176,1347
-----
```

End of Ham-Digital Digest V94 #260

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```
-----
Date: Thu, 4 Aug 94 12:15:07 -0500
From: news.delphi.com!usenet@uunet.uu.net
Subject: Tandy 1000EX
To: ham-digital@ucsd.edu
```

Mike Grose <mike.grose@bthouse.com> writes:

>I have a friend trying to get his packet station going. He has a Tandy  
>1000EX with the memory expansion board giving it 640 ram. It loads up  
>DOS fine, but when he loads up a packet program, it gives an error  
>message:Pack File Corrupt. Does anyone have any suggestions on  
>correcting this problem. He has an AEA PK232-MBX tnc also. Any help  
>would be appreciated. 73's de KE4CLE.

Without having any info on which program he is using, it sounds like a bad executeable. I would suggest that he try a [plain-jane comm package like PAX (my favorite for just putting around), or anything else he would use to run a modem. If he can controll it with a commpackage, get a new copy of the packet software. Another good idea would be to check the laptop for viruses!

practice safe computing!

73 de n1qdq

-----  
End of Ham-Digital Digest V94 #261

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